

CLAIMS:

1. A television signal (TS) comprising picture data (P1), the television signal furthermore comprising a predetermined seed (S1), usable for initiating a pseudo-random generator yielding a deterministic sequence of random values to be used for adding noise to the picture data.
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2. A television signal as claimed in claim 1, in which the signal comprises several seeds (S1, S2) for respective groups of pictures (P1, P2).
3. A television signal as claimed in claim 1, comprising for at least one picture
10 (P1) several seeds (S1, S1'), usable for generating noise for respective different spatial regions of the at least one picture (P1).
4. A television signal as claimed in one of the previous claims, comprising further coefficients (C1) for tuning an algorithm of the pseudo-random generator.
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5. A television signal as claimed in one of the previous claims, furthermore comprising a random generator type indicator (T1), indicating a specific one of a plurality of supported pseudo-random generators.
- 20 6. A television signal as claimed in claim 1 or 5, comprising at least two alternative seeds (S1, S11), in which a first alternative seed (S1) is to be used for a first supported pseudo-random generator or alternatively a second alternative seed (S11) is to be used for a second supported pseudo-random generator.
- 25 7. A television signal as claimed in one of the previous claims, comprising the picture data (P1) in compressed form.
8. A television signal as claimed in claim 7 comprising the picture data (P1) in "advanced video compression" compressed form.

9. A data carrier (310) comprising a television signal (TS) as claimed in one of the previous claims.
- 5 10. A data carrier (310) according to the blue-ray disk specification, comprising a signal as claimed in one of the claims 1-8.
11. A signal processing unit (200) arranged to receive a television signal (TS) as claimed in claim 1, and further comprising extraction means (202) arranged to:
- 10 - extract data picture elements from the picture data (P1) in the television signal; and
- extract the seed (S1) from the television signal,
- and video processing means (204), comprising:
- a pseudo-random generator (208) arranged to generate a pseudo-random noise
- 15 sequence (NSEQ) of noise picture elements based upon the seed (S1); and
- adding means (210) arranged to add the noise picture elements to the data picture elements on an element-by-element basis, yielding an output picture signal (O) to be displayed.
- 20 12. A signal processing unit (200) as claimed in claim 11, further arranged to handle a television signal (TS) as claimed in claim 2, in which the extraction means (202) is arranged to extract a new seed (S2) for a consecutive time instant, and the pseudo-random generator (208) is arranged to restart a pseudo-random noise sequence (NSEQ) generation for the new seed (S2).
- 25 13. A signal processing unit (200) as claimed in claim 11, further arranged to handle a television signal (TS) as claimed in claim 3, in which the extraction means (202) is arranged to extract several seeds (S1, S1') for a picture (P1), in which the pseudo-random generator (208) is arranged to generate a pseudo-random noise sequence (NSEQ)
- 30 corresponding to each of the several seeds (S1, S1'), and in which the video processing means (204) is arranged to add the noise picture elements based upon the different seeds (S1, S1') to respective different regions of the picture (P1).

14. A signal processing unit (200) as claimed in claim 11, further arranged to handle a television signal (TS) as claimed in claim 4, in which the extraction means (202) is further arranged to extract coefficients (C1), and in which the pseudo-random generator (208) is arranged to adapt its algorithm for generating the pseudo-random noise sequence (NSEQ) upon the coefficients.

15. A signal processing unit (200) as claimed in claim 11, further arranged to handle a television signal (TS) as claimed in claim 5, in which the extraction means (202) is further arranged to extract a random generator type indicator (T1), and in which the video processing means (204) is arranged to select a particular of a number of supported random generation algorithms in dependence upon the type indicator (T1).

16. A disk reader apparatus (300) comprising:
- a data carrier input unit for inputting a data carrier(310) as claimed in claim 9 or 10, further capable of extracting from the data carrier a television signal (TS) as claimed in claim 1;
- a signal processing unit (200) as claimed in one of the claims 11 to 15, arranged to supply the output picture signal (O); and
- a television signal output arranged to transfer the output picture signal (O) containing generated noise to a display.

17. A television signal receiving system (320) comprising:
- a receiving unit arranged to receive from a wired or wireless connection to a television data source a television signal (TS) as claimed in claim 1; and
- a signal processing unit (200) as claimed in one of the claims 11 to 15, arranged receive the television signal (TS) from the receiving unit and to supply the output picture signal (O) containing generated noise.

18. A method of supplying an output picture signal, comprising:
- receiving a television signal as claimed in claim 1;
- extracting data picture elements from the picture data in the television signal;
- extracting the seed from the television signal,
- generating a pseudo-random noise sequence of noise picture elements based upon the seed; and

- adding the noise picture elements to the data picture elements on an element-by-element basis, yielding the output picture signal.

19. A computer program product comprising code enabling a processor to execute
5 the method of claim 18.

20. A method of incorporating a seed in a television signal as claimed in claim 1,
comprising:

- 10 S1) fetching data picture elements;
S2) generating noise picture elements for at least one selected seed;
S3) adding the noise picture elements to the data picture elements yielding an
output picture signal;
S4) analyzing the output picture signal by a human operator, or automatically
analyzing the noise addition according to a predetermined quality determination method
15 applying pre-programmed heuristics, either method yielding a decision output equal to PASS
or FAIL;
S5) automatically incorporating the currently selected and analyzed seed in the
television signal if the decision output equals PASS, and continuing with the second step S2
for a new selected seed if the decision output equals FAIL.